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10/086,473	02/28/2002	Andreas F. Kotowski	RAPI-011	2361

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EXAMINER

NGUYEN, MINH T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,473

Applicant(s)

KOTOWSKI ET AL.

Examiner

Minh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants' response filed on 2/7/04 has been received and entered. Claims 1-27 are pending. New grounds of rejections necessitated by the amendment are set forth below. This action is FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claim 15, the specification does not enable the newly added limitation which is the pencil beam of x-rays is of sufficiently low energy to avoid detection if passing through the object after backscattering by the Z material panel. Specifically, the invention merely concerns about detecting the backscattered x-rays as a result of interacting with the object and the low Z material panel wherein the object located between the detector and the panel. In other words, the invention does not disclose the energy level of the source must be of sufficiently low to avoid

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detection after backscattering by the low Z material panel as recited in the claim. Since the newly added limitation is a new matter which is never mentioned and/or disclosed in the original specification, this newly added limitation is not permitted.

As per claims 1-14 and 16-27, the same problem exists as discussed in claim 15.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,974,247, issued to Friddell.

As per claim 15, Friddell discloses an apparatus (Fig. 1) to detect concealed items on or in an object (see the abstract), comprising:

an x-ray source (12) and a scanner (18), the x-ray source to produce a pencil beam (column 5, lines 22-23) to an object (16);

a detector (34) to detect x-rays scattered (column 5, last line, column 6, lines 1-19, i.e., the pencil beam of x-rays from the source 12 interacts with the object 16 and is backscattered by the object. For those areas which are not covered by the object 16, the pencil beam of x-rays from the source 12 interacts with the low Z material panel 32 and is backscattered by the low Z material panel 32) as a result of interacting with the object (16) and a low Z material panel (32,

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see column 6, line 42, i.e., low atomic sheet material), the object 16 is located between the detector (34) and the panel (32).

In column 6, lines 48-54, Friddell explicitly discloses that the energy level of the pencil beam of x-rays generated by the source 12 can be increased or decreased depending on the different types of objects. The purpose of adjusting the energy level is for obtaining the optimum image contrast so that the concealed items can be seen.

Friddell does not explicitly disclose the adjustment of the pencil beam of x-rays is of sufficiently low energy to avoid detection if passing through the object after backscattering by the Z material panel as called for in the claim.

However, as held by the court, when the structure of the apparatus which is recited in the claim is the same (in this instant case, the Friddell's apparatus has all the recited structure as discussed above), changing the energy level of the pencil beam of x-rays from one to another (by adjusting the energy level generated by the source 12 as explicitly taught in column 6, lines 48-54 of Friddell) to obtain the optimum image is not patentable since the practice can be done by an average person skilled in the art.

It would have been obvious to one skilled in the art at the time of the invention was made to adjust the pencil beam of x-rays to a level which is sufficiently low to avoid detection if passing through the object after backscattering by the Z material panel. The motivation would be to obtain the clearest image on the display.

As per claim 16, the recited limitation reads on the processor (38).

As per claim 17, the recited limitation reads on the display unit (42).

As per claim 18, Friddell discloses the apparatus as discussed in claim 15. He further explicitly teaches the low Z material is chosen based on the object being inspected (column 6, lines 37-45). However, he does not explicitly disclose the low Z material is made of polyethylene as called for in the claim.

However, as held by the court, when the structure of the apparatus (overall conditions) are met, changing the material (the low Z material) from one to another to obtain the optimum condition is not patentable since the practice can be done by an average person skilled in the art.

It would have been obvious to one skilled in the art at the time of the invention was made to modify the Friddell panel (32) using a certain material such as polyethylene for the motivation to obtain optimum images shown in the display when the Friddell's apparatus is used to detect a certain, known Z object.

As per claims 19-20, these claims are rejected for the same reasons and motivations as discussed in claim 18.

As per claim 21, Friddell does not explicitly disclose a radiation shield as called for in the claim. However, this limitation is seen as obvious by a person skilled in the art at the time of the invention was made since human being are known for being harmed when exposed to x-ray beams, i.e., the apparatus needs radiation shields for safety purpose.

As per claims 22-25, materials such as steel, lead used as absorbing materials for radiation shield and the selection of the thickness of the materials are well-known in the art.

As per claim 26-27, adjusting the positions of the low Z material panels to obtain the optimum images is seen as an obvious adjusting for the same motivation discussed in claim 18.

As per claim 1, this claim is merely a method to operate the apparatus noted in claim 15, since the apparatus discussed in claim 15 is disclosed, the method to operate such an apparatus is seen as obvious.

As per claims 2-3, rejected for the same reasons noted in claims 16-17, respectively.

As per claims 4-13, same rejections as claims 18-27.

As per claim 14, same rejection as claim 1.

Response to Arguments

4. Applicant's arguments filed on 2/7/04 have been fully considered but they are not persuasive.

Regarding the argument that the newly added limitation to each of the independent claims is shown in figures 5 and 6.

Figures 5 and 6 have been carefully studied in view of the argument. However, there is nothing there which discloses the pencil beam of x-rays must be of sufficiently low energy to avoid detection if passing through the object after backscattering by the Z material panel. Figures 5 and 6 merely disclose the images seen on the display when the pencil beam of x-rays backscattered from the metal bar 504, the low Z material 500 and the object 12. Because the atomic numbers of the object 12, the metal bar 504, the low Z material 500 are different, the images of these objects can be detected without the need to require the pencil beam of x-rays must be of sufficiently low energy to avoid detection if passing through the object after backscattering by the Z material panel. For this reason, the recited limitation is not seen as disclosed in figures 5 and 6. It must be explicitly taught to avoid new matter problem.

Regarding the argument Friddell detects both backscattered radiation from the object and the low Z material does not mean that Friddell is differentiating between these two.

As well understood, detecting an object means differentiating that object from its surrounding. Friddell's apparatus is a detecting system, therefore, detecting the backscattered radiations from the object and the low Z material to display the image of the object on the screen is the act of differentiating that object from its surrounding.

Other arguments are considered, but moot in view of the new grounds of rejections.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

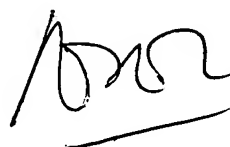
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is **571-272-1748**. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



4/15/05

Minh Nguyen
Primary Examiner
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